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# Atheism and Pantheism,

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## LECTURE

DELIVERED BEFORE THE

YOUNG MEN'S ASSOCIATION

FOR

MUTUAL IMPROVEMENT IN THE CITY OF ALBANY,

ON

FRIDAY EVENING, MARCH 10, 1848.

BY CHARLES MURRAY NAIRNE, M. A.,  
*Prof. of Mathematics, etc., in the Albany Female Academy.*



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## CORRESPONDENCE.

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ALBANY, March 17, 1848.

DEAR SIR :

The undersigned committee take great pleasure in communicating to you the following resolution, passed unanimously, at the last meeting of our Board :

*"Resolved,* That a committee of three be appointed by the President, to request of Professor NAIRNE, a copy of his Lecture before the Association for publication; and that if the same be obtained, the said committee proceed to publish it."

To the above, permit us to add our earnest congratulations on the brilliant success of that effort, and our hope that the public and ourselves may be gratified with its speedy re-appearance in the form proposed.

We remain, Rev. and Dear Sir,

Yours most respectfully,

M. W. L'AMOUREUX,

WM. DEY ERMAND,

WM. B. SPRAGUE, JR.,

*Committee.*

Professor NAIRNE.

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ALBANY. 18th March, 1848.

GENTLEMEN :

When I first heard, unexpectedly, that a desire had been expressed for the publication of my Lecture before your Association, on Atheism and Pantheism, I was strongly inclined, for reasons which I need not here specify, respectfully to refuse acceding to the request. But I now find that this desire is so general and decided, that I defer at once to the public judgment, and cheerfully surrender to you the manuscript, that you may use it as you see fit.

May I beg that you will accept for yourselves, and convey to the Association, my grateful acknowledgement of the very flattering manner in which my services have been received.

I have the honor to be, gentlemen,

Very faithfully yours,

CHARLES MURRAY NAIRNE.

To M. W. L'AMOUREUX,

WM. DEY ERMAND, and

WM. B. SPRAGUE, JR., Esq's.

**ERRATA.**

On page 15, 16th line from top, instead of *he were*, read *he himself were*.

On page 20, 14th line from top, instead of *to be baffled* read *to lie baffled*.

## ATHEISM AND PANTHEISM.

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IN bringing up the rear of the body of distinguished lecturers who have this season addressed you, I have chosen a subject which, I trust, will not be found unsuitable to the occasion. Anticipated in other themes by some of my predecessors, I have taken refuge in the common-place, but ever momentous question of a God; and from my humble position, I may be able, in the discussion of that question, to throw some light, however feeble; upon the various matters which, from year to year, are brought under your notice, and thus to direct you, so far, both as to the right mode of pursuing your studies — for though retired from the schools, you are still an association of students — and as to the great end whither all your investigations ought to conduct you.

There can be no doubt that, apart altogether from the disclosures of Nature and Revelation concerning a Creator and Ruler of the universe, much that is interesting, profitable and every way worthy of the human intellect, may be evolved from the worlds of matter and of mind. The laws, corporeal and spiritual, of our own wondrous constitution — the curious processes which are carried on in the laboratories of earth, air and sea — the chemistry and mechanics of organization, analogous, but infinitely superior, to human operations — the magnificent and complicated machinery of the heavens — the inventions and discoveries by which the comfort and progress of society are secured — the moral, political and intellectual means which have been, or ought to be, adopted for the well-being of individuals and communities,

and for the furtherance of the dignity of man — all these, and many more, are subjects deserving of your most attentive consideration, and certain to repay your researches in a return of mental, if not of material wealth. They are in themselves, and with reference to the present life alone, topics of profound concernment. But, at the same time, when viewed only in that light, they lose by far the most important part of that interest and value which really belong to them. Then, even their beauty and sublimity are but very partially discerned, and the whole field they occupy is overspread with an obscurity, through which, indeed, much that is good and great, fair and wonderful, may be perceived, but which, nevertheless, behooves to be felt as an obstruction and a source of perplexity, that every truth-loving and order-loving mind — every truly philosophic spirit — longs earnestly to have removed.

In the stillness of a star-lit night, you may have cast your eyes over some fine landscape, and as you traced the glimmering outline of the woods, and recognized the dark masses of the mountain range, and saw the gems of the sky reflected in the river's bosom, as, with placid sound, it rolled along, and descried the mansions, turreted and grey, or less fantastic and less hallowed by time, rising through the shade, and moralizing the whole scene with the interests and occupations of man; and as you stood and gazed, you have said within yourselves, how fair would this prospect be, were the moon now pouring her lustre on river, and wood, and dwelling, and hill; and how passing fair, when it lies glowing in the full sunshine that at once discloses and augments its loveliness! Nay, the very pleasure with which, in the gloom, you behold it, is mainly owing to your recollection of the daylight glories of similar scenes; and you can scarcely fancy the dim and dull impression which it would make on a being who could not, from such recollection, fill up its proportions, and body forth its hidden features in the exercise of an imagination which had been informed by the actual survey of the unveiled beauties of nature. It is even so with creation when contemplated apart *from a Creator*. It is even so with the present condition of things

when regarded apart from the God whose attributes and ways the Bible unfolds. In this case, there lowers a most perplexing obscurity over the whole. I can discern beauties, but they are clouded; harmonies, but when I attempt to track them, they fade in the infinity of the surrounding darkness; design, but it is only fragmentary, and not seldom apparently frustrated; operations, benevolent, and to some extent, effectual, but often cruelly interfered with, and rendered perplexingly abortive; something grand and graceful, it is true, but shadowy and evanescent, dreamy and dubious, without beginning and without end; and I am puzzled to account for interruptions, and vacuities, and discrepancies, and disturbances, and feel intensely the need of some superior illumination to irradiate the entire field of view, and dispel the mystery — a mystery as much of confusion as of vastness — that broods over every thing before me. Chains of causation I can partially trace, but I discern no omnipotent hand from which they are suspended; goodly fabrics of antecedent and consequent I can see, but no rock of ages on which their foundations are laid; motion I perceive, but no prime mover; regularity, but no regulator; law, but no lawgiver; life, but no fountain of life; scattered portions of truth, but no great being who is the substance of truth — in whom all truth centres — and of whose nature all truth is only the discovery and the outward expression. Now, the existence of a supreme creator and ruler is the master-key to the whole mystery. It is the day spring from on high which, illuminating this terrene, brings to view its order and dependence, its origin and its end; enables us to walk surely like them that walk at noon, instead of groping and peering like those who walk in darkness; and gives rest to the soul's tired and jaded wings, by presenting an ultimate object whereon, in common with the entire universe, the exploring spirit reposes from its travel, and is satisfied.

When I first look up unto the heavens, I behold nothing save an expanse of splendid confusion — a high o'erarching canopy glittering with lights of spiritual brightness. Their distances are all the same to my vision, and they appear scattered over the



mighty concave at random. No sound issues from the aërial dome—no living thing can be discerned—walking amidst or underneath these lamps; and when they themselves are, at length, discovered to move, their march is tardy and without array; for they fall not in ranks, and some of them seem to wander even from their own circles. Amid the multiplicity of luminaries there is nevertheless obscurity. The stars are still the stars of night. Whence are they, I ask, and what are they? What is their nature and what their use? Is the frame-work in which thy are inlaid really a firmament—a substantial resisting canopy—and do they stud its surface merely to regale my eyes, and exercise my curious fancy? I cannot tell.

As yet I cannot tell; but let me grasp the torch of science. The astronomer demonstrates that these lamps are orbs—worlds like our own; that they revolve in paths of geometric symmetry, although so vast that the whole vault over-head is too limited a scroll to exhibit such a portion of these paths as would determine these figures to our sight; and that, throughout all space, there prevails a law which governs the huge globes wherewith its amplitudes are filled, and under this law, that which originally appears disorder is regularity, far more accurate and exquisite than that of the most ingenious and delicate of human contrivances. Now I begin to approach towards satisfaction. The firmament, I find, is not a solid crystalline roof; neither is there any longer disorder among the starry train. My mind now cleaves the depths of space, and to the piercing glance of science, mechanism, stupendous both in magnitude and harmony, is disclosed in its mighty and mysterious recesses. But after all I am not yet satisfied. My spirit pants with the majesty of its own discoveries. I am confounded by the very grandeur which has been evoked. Amidst an illimitable universe I now stand awestruck and baffled, as if too daring in my curiosity, I had intruded, under guidance of a potent genius, into a region of sublimity, where even he might fear to tread. Here, however, it is that Revelation comes to assure me of what my reason had already conceived. It tells me that there is a God, and that God reigneth.

Within the infinite domain where I had penetrated, it points me to a throne, and to a Sovereign seated thereon. The Almighty Maker and Mover is revealed! My wonder now becomes adoration, my astonishment is now exalted into reverence. The insecurity, the uncertainty, and the absence of cause which oppressed my soul, are now gone. It no more falters amid unexplained marvels. It has risen to the summit of truth, and from that empyreal height, it sees, like a seraph on the battlements of Heaven, the whole creation roll beneath it without shock and without confusion. The light which the astronomer kindled was sufficient only to show the vastness of the prospect. Dimness and shadows still lay upon its illimitably receding depths. It was still the landscape without the Sun. The God who said, let the astronomer be, was still to be himself revealed; and then, but not till then, all became really light, and the orbs of the sky were perceived to obey his voice, and their splendor seen to be an emanation from the "coëternal beam of the Eternal"—the light that is inaccessible and full of glory—

"Bright effluence of bright essence uncreate!"

It is thus that the existence of a God forms the key-stone of the entire structure of knowledge. His being is the grand truth that, like the central sphere of our solar system, gathers all others around it, and harmonizes them all, and sheds light upon them all, and infuses life into them all; and he that would shut out this truth from his investigations, is scarcely so wise as the man who should make his own chamber his universe, and content himself with examining its paltry appointments by the glimmer of his own taper, while he jealously excluded every ray coming from the fair and illuminated world beyond its walls!

The Bible tells us that before man was made, the Earth was replenished with every green and every breathing thing. The garden was planted and watered, and it teemed with life and loveliness. Streams sparkled in the sun, breezes whispered in the shade, fruits glowed upon the boughs, flowers sprang from the sward and opened their fragrant bosoms to the day, birds warbled

among the bowers of Eden, beasts sported on its verdant glades, and all creatures awaited the advent of creation's lord, whose immortal mind was capable of ruling them, and of perceiving the wisdom, power and goodness which, though existing in their own frames and functions, they themselves were unable to comprehend. And surely it is no vain or improbable imagination to fancy the first man picturing to himself, how unfinished and unsatisfactory would have been the curious work before him, had he who was its crown and glory not been produced, and invested with dominion over it. We can still farther fancy his procedure, as in the exercise of his newly awakened consciousness, he must have enquired into the secret of his own being—gazing, for a moment, on external things, and then turning to his own body, perusing his own limbs, trying his own powers, and when he found all so accurately and surprisingly made, questioning the creatures already formed, as if they, with thought and speech like his own, could tell him whence and what he was, and conjecturing, in the fulness of his doubt and wonder, what all the enchantment around him could mean, till, amid his mingled delight and bewilderment, he at length hears and recognizes the voice of God, and bending with instinctive reverence before his presence, learns from the Divine utterance, the mystery of his own existence and destiny, and the whole secret of the manifold other existences that encompassed him on every side. Such an incident as this would come upon him with all the cheerfulness and certainty of light. His undefined desires it would both bring to shape and satisfy, and like the discovery of any other great principle, it would reduce to order and clearness, that which without it, or something equivalent to it, would have forever remained to him a problem incapable of solution.

Now there is none of us in circumstances similar to those of the great progenitor of our race, or in such circumstances as we have imagined him to be with reference to the knowledge and theory of creation. The existence of a Creator and Supreme Ruler is part of our earliest and most familiar belief; and thus it is that we are under the necessity of making an effort to appreciate the

sudden and self-evidencing power of a discovery like that which I have supposed to be made to him. Nevertheless, on making such an effort the result will be strongly felt, and we shall perceive that a world without a God presents, in its physical relations, a system dubious, and incoherent, and fractional; as much so at least as a chemistry without affinity, or an astronomy without gravitation; and in its moral and religious aspects, a "confusion worse confounded" than a system of ethics without conscience, or than Christianity without the atonement.

There are two systems of doctrine, one of which absolutely, and the other virtually, excludes from the circle of human knowledge the truth whose high importance I have, in these introductory observations, endeavored to set forth. These systems are ATHEISM and PANTHEISM. The former disputes the *existence* of a Creator and universal Governor; the latter either denies or explains away the *personality* of Deity. The Atheist declares that the being of a God has not yet been demonstrated; the Pantheist regards God as a mere principle; acknowledges law, but no hypostatical law-giver, and while tracing a supreme controlling energy in all the works of nature, either fails to ascribe that supremacy to one undivided, infinite mind, or deals with this fact so vaguely as to banish from our contemplation and homage the Possessor of divine power and authority, by separating their existence and efficacy from His being and His will. The Pantheist confesses the attribute, but disallows the intelligent subsistence in whom the attribute resides. The name of a Jehovah he seems at times to recognize; but Jehovah himself is, according to his mode of reasoning, a misty and meaningless abstraction.

These systems, you must be aware, are not new. If antiquity, as is sometimes believed, can render opinions venerable, they are fairly entitled to our veneration. Perhaps, with one or two exceptions, the whole body of Greek and Roman philosophers may be classed as either Atheists or Pantheists. They were, to a man, unbelievers in the popular superstitions of the day; and the little outward respect which they paid to Polytheism was paid in obedience to political expediency. They were not permitted

to forget that superstition was an instrument of control over the populace, which governments would not suffer to be weakened by open dissent. Hence the persecution of Socrates at Athens, because his unknown God would have no fellowship with false and vicious divinities ; and of the early Christians at Rome, because they would not be content with simply adding Jesus of Nazareth to the idols of the Pantheon, but avowed their purpose and determination to persevere in their own religion exclusively till every other should fall before it. Doubt and debate as the philosophers might on the nature of the gods in their schools and writings, which were inaccessible to the mass of the people, it was held to be their duty, as good citizens, to conform to the established mode of worship ; and they appear to have indemnified themselves for this external restraint, in the freedom of their academic discussions. Epicurus, than whom no heathen sage had more numerous and influential disciples, was an Atheist and Materialist — acknowledging the existence of the gods only on the prudent principle just mentioned, but even then dismissing them from all care of creation, and, as a philosopher, maintaining that nothing exists in nature except material atoms. Lucretius, in his work, “*De Rerum Natura*,” reproduced the same doctrines at Rome, and, in an age anterior to the Augustan, lent the charms of lofty poetry to the advocacy of Atheism and impiety. Pantheism, however, was the more prevalent system of the two, and formed, as we learn from Virgil — who, in the 6th book of his great poem, is believed to give an account of the matter — a principal part of the ancient mysteries, wherein the result of philosophical speculation was communicated, as a sort of transcendental creed, to the initiated.

But Atheism and Pantheism, although ancient, are not to be reckoned among the things that were. They are not defunct or worn out errors, on which the superior information of modern times looks back with pity, as the dreams of a dark and juvenile age of mankind. The Atheist even now promulgates his dismal skepticism, and grimly rejoices in being the denizen of a forsaken and fatherless world ; the Epicurean, albeit under another name,

sets up even now an imagination of his own, as a deity, with no moral characteristic save that of infinite sloth and indifference to human affairs; and the Pantheist even now deifies material law, or argues that man's own mind, gathering together its independent powers, and combining into the abstraction of a great original and controlling cause the exalted innate functions of human intellect and will, thus shapes for itself a divinity — that the creature actually creates for itself a creator, and adores the shadow of its own fancies. The work-shop, where these Titanian imitations of the antique are at present fabricated, is Germany — ponderous, persevering, but withal imaginative and penetrating Germany — and the mysterious operatives who there toil, like Mulciber and his Cyclops, amidst ethereal smoke, are such men as Hegel, and Strauss, and Feuerbach, and Ruge, and Stirner — the last of whom has arrived at the sublime conclusion that the ideas of God, and mankind, and country, are arbitrary generalizations, chimerical notions, devout imaginings, no where to be found within the sphere of reality — that, in fact, there is no real existence beyond the individual man, and that when moral and social law, founded on the hallucination aforesaid, shall be abandoned, as it ought, then men shall enjoy true liberty, and there shall be no more injustice, no more oppression, no more crime, and no more curse! These monstrous deductions, although supported in many instances with immense learning, and an intellectual acumen which scorns alike the levity of Voltaire and the vulgar caviling of Paine — which even smiles at the grave subtleties of Hume, as the infant efforts of metaphysical skill — these deductions we, on this side the Atlantic, might, one would think, safely disregard — at least we might, without reproach, disregard them upon the anti-human principles of Max Stirner's philosophy. But unfortunately we still have a passion for articles of European invention and manufacture, whether they be mental or material, and no sooner are they produced there, than we import a specimen, and set about making the same at home. The young and ardent spirit of this country, and the air of liberty which it breathes, are favorable to the reception of novelties, or

of old things that have been made to look like new, more especially when they come to us as the indications of a restlessness under despotism, and the struggles of undying mind to cast off a yoke by which it has long been encumbered and debased. Accordingly we find that not only every fresh scientific triumph effected in Europe, is here generously hailed, and keenly prosecuted, but likewise every pseudo-philosophic vagary which, under the imposing post-fix of *ology* or *ism*, foists itself into the roll of the sciences, speedily gains both disciples and propagandists in the United States of America. We cannot say that we are indifferent to this being otherwise, if possible; but at the same time we dread, and feel ourselves constrained to denounce, any attempt to crush by law, or what is perhaps worse, by violence, free discussion on any subject whatever; as is the case in some old countries, and in certain portions even of our own. The proper weapon wherewith to combat error is truth, and the proper safeguard against the prevalence of error is public opinion founded on truth, and as long as we have bold, accomplished and true men, who can and will wield this weapon, we will not submit to the crude and coarse repression of pains and penalties.

Non tali auxilio, nec defensoribus istis."

Truth, whether sacred or secular, needs not such aid. Her birth-place is Heaven, and her celestial nature is contaminated by the grasp of earthly power. In her native majesty she repudiates it; for she knows that she herself is great and will prevail, and she putteth not her trust in princes! Her true lovers, and rightful champions, however, must not be faint-hearted. To them she looks for defence, and, in the end at least, she will protect *them*. Let them, avoiding vituperation, and wrath, and misrepresentation, and all the enginery of the demagogue, go forth armed with eloquent and fearless argument, and assert at once and exercise the right of freemen to speak truth, even though the heathen should rage, and the people imagine a vain thing.

Before passing to the main question between Theism, Atheism and Pantheism, there are two points which, I think, require some elucidation. The first may be dismissed in very few words. It is the distinction which has been made betwixt Atheism and Antitheism. This is not a distinction without a difference, and it ought to be stated, if we would not do the Atheist injustice. We must give even him his due. The Antitheist, if there be such a person among rational men, maintains absolutely that there is no God. The Atheist maintains only that the being of a God has never been proved. The Atheist is thus less daring and decided in his opinion than the Antitheist. He professes not to be satisfied with any observations made within the range of his own knowledge, or reported by competent witnesses: but he dares not affirm that satisfactory evidence of a God does not anywhere exist. The Antitheist on the other hand, throws caution and philosophy to the winds, and proclaims, as if he were omniscient, that the being of a God is not only not proved, but that it is disproved. We can hardly say that he is in love with uncertainty — that is the Atheist's case perhaps — but he prefers the certainty of absolute negation, to the certainty of a great originating and controlling Cause. Like Moloch, in Milton's infernal conclave, he rushes at once into the worst, and would rather be nothing than leave the Almighty on the throne of Heaven! It is with the Atheist, however, that I have to deal. The Antitheist is probably beyond the reach of any reasoning of mine. At all events, I have no separate demonstration for his peculiar benefit.

The other point to which I referred, will need a little more explanation.

Those who believe in a God, and especially as he is revealed in scripture, are accustomed to maintain that he created all things, and that he upholds and directs all things for his own glory. This, they say, is his sole object in whatever he does; and consequently, as nothing in the universe is done without him, so every thing that happens, whether in the domain of matter or of spirit — in Heaven, in Earth, and in Hell — was designed, and is



executed or permitted, for the glory of God. Now, in such an argument as the present, it is of much consequence that this assertion should be rightly apprehended. Man finds it difficult to conceive and speak of God, without a certain mixture of ideas that are merely human. If one of our fellow mortals were to set up his own pleasure and his own praise, as the exclusive end of all his actions, and were he, moreover, despotically to insist on those around him continually ministering to this appetite of his, he would be regarded most deservedly as a revolting impersonation of selfishness. We should either rise in scorn against the vain-glorious autocrat, or abandon him to the dreariness of his own isolation. Even if he were philosopher enough to perceive that true honor and happiness are the meed of justice and benevolence, and should therefore endeavor to practice these virtues, the avowal that he did so simply for private and personal advantage, would immediately transmute them into instruments of self-interest. It is true that there is great reward and unspeakable enjoyment, in the doing of that which is right and good, and that the virtuous man infallibly reaps this enjoyment; but he no more acts solely for the enjoyment's sake, than the temperate man eats and drinks merely or mainly for sensual gratification, and not for the refreshment and sustenance of his powers. We must be careful to distinguish between the objects of virtue and the pleasures of virtue. On its proper objects, virtue rests and terminates. It fulfils obligations and exercises benevolence, because these are duties; and the delight which uniformly attends it, is only a kind arrangement of that same Providence, which has made it sweet for the ear to hear melody, and pleasant to the eyes to behold the Sun.

And yet, in the Bible we find it thus written:—"Thou art worthy, O Lord, to receive glory, and honor, and power; for thou hast created all things, and for thy *pleasure* they *are* and were created." For his pleasure they were made—for his pleasure they are—they exist. The terms are most explicit. How are we to understand them?

As we draw a distinction between the objects of virtue and the

pleasures of virtue, so we must also distinguish between sovereignty and selfishness. If there be a God, it is evident that he must be sovereign. The reverse proposition would be a contradiction in terms. Besides, God must be an irresponsible sovereign, or rather he is responsible to himself alone. He needs no adviser, and admits of none. His authority is his by right. His dominion is absolute. He is our Lord, our Master, our Owner; and we are not only his subjects, but his property. We had no voice in placing him on the throne. In his administration we have positively nothing to say. He has granted us the privilege of humble petition, indeed, but not even the shadow of a suffrage; and no popular agitation, or pressure from without, or fear of being called to account, can ever enter that council chamber where He sits, majestic and alone!

Now, in the case of beings like ourselves, unlimited, arbitrary power is so abhorrent to our innate sense of equality, and our claim of freedom, that we cannot endure it, even in idea; and hence, forgetting that God is not man, nor affected with creature imperfection, we are startled, on its first announcement, with the doctrine, that he ordains and does all things for his own glory — that what he himself chooses is his only rule. Nevertheless, there is no help for it. A God must reign uncontrolled, or there can be no God. But then, let it be remembered, that he *is God*, and therefore altogether worthy of our homage, and incapable of choosing what is wrong. Under his empire, our consolation, our security, our joy consist, or ought to consist, in the fact that he is infinite, eternal, and unchangeable in wisdom, power, holiness, justice, goodness and truth. To do his bidding cheerfully and without let or hindrance, is perfect liberty — the liberty of Heaven; to oppose his will, and subject ourselves to our own, is perfect slavery — the slavery, when consummated, of the second death. The harmony of the universe is such, that submission to its sovereign is blessedness, and rebellion, misery. I shall neither be entirely free, nor entirely happy, till God's will becomes entirely mine; and God's *word* is felt by me to be the most

cogent and convincing of all *reasons*. It is thus that our very enjoyment depends upon God's absolute supremacy, and our complete emancipation from bondage, on his doing and directing every thing to his own glory. In his glory, our good is wrapped up.

But we must examine this matter a little farther; although your time and patience—concerning the limits of which, friends have taken pains to admonish me—will not allow me to do much more than to indicate my train of thought upon the subject.

When it is alleged that the chief end of creation is to glorify the Creator, there are several questions which present themselves for solution. First, it may be asked, Are we to understand that the felicity of God is augmented by, or to any extent dependent upon, the service of his creatures, or that his attributes become more manifest and more glorious to himself, by being displayed in the formation and government of the universe? To which I answer, in the mean time, that God certainly does take pleasure in creating and governing. Of this there can be no doubt. But to say so is nothing more than to affirm that he takes pleasure in every thing he does. Such is the very necessity of his nature. Still, it may again be asked, What was his motive in bringing the universe into existence, and by what principle is he guided in the administration of its affairs? Was it merely to gratify himself, that he spoke all things into being? Is it merely to please himself, that he sways the sceptre over all things? And does he demand the adoration of all creatures, because, actuated by an immense love of approbation, he feels that the want of praise would disturb his peace, and detract from his satisfaction? My reply to these interrogatories, as well as to the former in full, will not be strictly categorical, but will comprehend the import of the whole in one.

I say, then, that neither by the works of his hands, nor by the homage of his creatures, can God add to his essential glory, or augment his inherent blessedness, or become more intimately acquainted with his own attributes. From all eternity his glory, his blessedness, and his knowledge have been infinite, and to all

eternity they shall continue to be so. They are susceptible neither of increase nor diminution.

The Deity is from everlasting to everlasting. His being includes an eternity that is past, as well as an eternity that is to come. Both these ideas are, in the abstract, equally beyond human comprehension; yet practically, it does not appear so difficult and perplexing to conceive of an endless prospective duration, as of a retrospective duration without any commencement. And the cause of this difference seems to be, that there are other intelligences—for example, angels and souls of men—who are immortal, or without end, equally with God himself; whereas he is the only being who is at once eternal and immortal, without beginning of days or end of life. A similar instance of popular but inaccurate reasoning is furnished by our usual notions of memory and foreknowledge. And in this instance it is remarkable that the difficulty of conception attaches itself to the *future* and not to the *past*, as in the former case. Memory is a very common exercise of mind; and hence the recollection of past occurrences, we do not generally regard as wonderful. Foreknowledge, on the contrary, is a power belonging to God alone, or temporarily and partially to those of his servants on whom he may have bestowed it for a specific and miraculous purpose. Consequently, because of its rarity and particular design, the prescience of things to come is viewed by us with far greater astonishment, than the remembrance of things which have already happened. Nevertheless, absolutely, both are alike marvellous—the one in revealed religion, and the other in natural, are gifts alike indicative of a Supreme Being. So, also, it is with respect to the past eternity of God. That property of his nature is just as incomprehensible, but not more so; and certainly not more improbable than his future endless existence.

“One might figure,” says Dr. Chalmers, “a futurity that never ceases to flow, and which has no termination; but who can climb his ascending way among the obscurities of that infinite which is behind him? Who can travel in thought along the track of generations gone by, till he has overtaken the eternity which lies

in that direction? Who can look across the millions of ages that have elapsed, and from an ulterior post of observation, look again to another and another succession of centuries; and at each farther extremity of this series of retrospects, stretch backward his regards on an antiquity as remote and indefinite as ever? Could we, by any number of successive strides over these mighty intervals, at length reach the fountain head of duration, our spirits might be at rest. But to think of duration as having no fountain head—to think of time with no beginning—to uplift the imagination along the heights of an antiquity which has positively no summit—to soar these upward steepes till, dizzyed by the altitude, we can keep no longer on the wing—for the mind to make these repeated flights from one pinnacle up to another, and instead of scaling the mysterious elevation, to be baffled at its foot, or loose itself among the long withdrawing recesses of that primeval distance, which, at length, merges away into a fathomless unknown—this is an exercise utterly discomfiting to the puny faculties of man.” Still, utterly discomfiting to man’s puny faculties though this exercise be, the fact, incomprehensible and overwhelming as it is, cannot be denied, that if there be One who is the source of all existence, he never himself had, and never could have, a beginning. The Uncreated must have endured forever.

Now, in the fathomless depths, or unapproachable heights of this past eternity, there must have been a period when the worlds and they that dwell in them were yet to be called into being—when immensity was occupied only by the invisible presence of the infinite God; who, “best with himself accompanied,” sought no social communication, found pleasure in none but himself, and was satisfied with contemplating in himself solely, the boundless, and unchangeable because boundless, attributes of his own Godhead; whereof one, his wisdom, says for herself, “he possessed me in the beginning of his way, before his works of old; then was I with him, as one brought up with him; I was daily his delight, rejoicing always before him. And were not this delight and satisfaction, even then as now, unspeakable, unimaginable,

perfect? Did not the Omniscient One, even then as now, fully comprehend and rightly estimate those transcendent perfections, which can never be fully comprehended or rightly estimated except by himself alone? Can there be any doubt that his blessedness was ineffable, inconceivable, unlimited, and his glory, in its very utmost amplitude, altogether known and appreciated by himself, before any creature was formed, and before he could receive from any creature the tribute of gratitude, obedience and praise? There clearly can be none: for such is the very nature of an infinite and necessary Being.

What then are we to understand by God's creating, preserving and governing all things for his own glory? It was not to increase his own *blessedness*, or to supply any personal want; because he in himself is perfect, and in him is no deficiency found. It was not to increase or confirm his *knowledge*, by experimenting on his own power and skill. In a word, it could not be to augment that which was always infinite, or to alter, either in kind or degree, that which always was and always will be immutable in both. To what conclusion, therefore, must we come? Evidently nothing more can be meant than this; that in all his designs and all his doings, the Creator has no counsellor or controller, and requires none, save his own just and gracious will; that creating and governing, making and moving are, so to speak, divine recreations, wherein he takes pleasure though he needs it not; and that the object of his operations in the universe, of which he is the maker and mover, is to manifest his glory to his creatures through his doings, that they, perceiving, admiring, and reverencing that glory, may secure their own felicity by such noble and appropriate exercise of the powers wherewith he has endowed them. There is not only sound divinity, but likewise profound philosophy, in the first proposition of a well known treatise, by some little understood and lightly esteemed, yet venerated by those who do understand it, and which says that "man's chief end is to glorify God, and to enjoy him for ever." The connexion between the two members of this noble announcement is, that it is in the investigation and adoration of God's perfections, and in the learning and fulfilling of God's will, which is the transcript and

outward expression of his character, that man's enjoyment in a perfect state consists. I surely require not to apologize for appealing to high authority on this high theme. "This is life eternal, to know the only true God, and Jesus Christ whom he hath sent." The happiness of heaven is not merely *attained* by a saving knowledge of the Father and the Son—it actually *consists* in the knowledge of God, as he is revealed in all truth; but especially as he is revealed in and by the Word, who was with him in the beginning, and whose province it is to declare the King eternal, immortal, and invisible. In the magnificent description of the Seer of Patmos—a description absolutely radiant with the beatific vision—in his magnificent description of the celestial city, he tells us, that it shall have no need of the Sun, neither of the Moon, to shine in it; for the glory of God shall lighten it, and the Lamb shall be the light thereof. There is something very significant and satisfactory in this disclosure. It affords us an intelligible glimpse into the physical world beyond time and the grave. What, if in the existing state of things, the sun and moon were to be quenched—what, if the silence and darkness which prevailed upon the face of the deep before the present system of being was evolved from chaos, were now to overspread the world! How dreary the universal blank! drearier far than that complained of by the blind poet when, with a mixture of grandeur and pathos unequalled in any other man, he prayed—

"So much the rather thou, Celestial Light,  
Shine inward"—

and how intensely should we long for a dawn, brightening into perfect day, that we might again behold the works of God, beautiful with light, and replete with proofs of his being and perfections! But if, instead of a lustre emanating from the orbs of heaven—faint images of the Father of Lights—God, and He who is the brightness of the Father's glory, were themselves to invest each object with their own essential effulgence, and the splendor of their visible presence were to beam from every star and mountain, forest, field, and stream, clearer than even from the bush that *burned*, or the *shekinah* between the cherubim, or the flaming

top of Sinai, or the living, looking, eye-lit chariot wheels of the prophet's vision—should we then regret the absence of a secondary splendor—should we then, walking amid uncreated rays—the direct effluence of Divinity—desire a return to the comparative dimness of created luminaries? That were to prefer the shadow to the substance! Yet now when we are assured that, in the world to come, where inference and faith give place to sight, the blest inhabitants need not the light of the sun and moon, we thence perceive that when man reaches his perfect condition, the Father and the Word shall be visible in all things; the majestic canopy over our heads, instead of reflecting the radiance of the material orb of day, shall glow with the glory of the sun of Righteousness, and God shall shine forth from every leaf, and drop, and atom—God shall be all, and *in all*; and nature throughout her every province, and minutest subdivision, shall teem with testimony to the existence and attributes of her omniscient and almighty Author. Such is the inference that we derive from the declaration that God and the Lamb are the LIGHT of the celestial world; and this inference is corroborated by the additional fact, that in Heaven they have no *temple* like the earthly palace of the King of kings; but that the same God-head which is the light of that resplendent region, is also the temple of it. There, angels and the redeemed have no need of ordinance and ceremony, as we have here below, to aid their conceptions of Divinity. All objects around them are instinct with God-head; the Most High is every where beheld: and when the immortal and incorruptible shall expatiate amid the boundless beauty of that happy land, they shall be at all times, and in all places, sensibly with God—his glory shall be ever on their lips, as his presence and perfections shall be ever before their eyes—God shall be all, and in all, and over all, blessed for ever more!\*

\* This is the Pantheism of the Bible—which teaches the personal omnipresence of God—a doctrine true, but incomprehensible, as all others involving the infinite perfections of Divinity are also incomprehensible, by finite intellect. Such Pantheism is not the universal diffusion of a *principle*. It is the *total, indivisible* presence of God in every thing, and in every point of space.



But farther, you will observe that according to the view of the universe now presented, every intelligent created being is not simply a percipient of the Divine glory. He is also the mirror and the channel of that glory—an object in which it is exhibited—a medium through which it is conveyed to his fellows; and thus, as well as in the former sense, he answers the great end of his existence. In him the glory of God is illustrated to other beings, and thus the two-fold purpose of enjoying God, and manifesting God's glory in life, and speech, and action, is secured. The chief end of man—the chief end of angels—the chief end of all minds—is, therefore, to glorify God, and to enjoy him for ever.

You cannot fail to have noticed that in this our attempt to settle the import of creation's chief end being God's glory, we have arrived by an indirect route at one of the ways in which the existence and attributes of God may be demonstrated. According to our understanding of revelation upon this point, every creature of God, whether animate or inanimate, rational or irrational, is fitted and was expressly designed to communicate instruction concerning himself. The truth is, we can know nothing of the Deity, unless by that which he has been pleased to disclose in the kingdoms of nature and of grace. For we hold that all arguments *a priori* for the being and perfections of the Almighty, are illogical and barely intelligible. These arguments have been so characterized by the highest authorities; and your time will not permit me to turn aside and expose futility. You will find some profound strictures on one celebrated *a priori* demonstration, that of Samuel Clarke, in Dr. Chalmers's work on Natural Theology, which prove that the Scottish divine *was* indeed a metaphysician, and one of no mean order; although the splendor of his illustrations and the fervid power of his style, render even metaphysical discussion so attractive in his hands, as that many readers fail to recognize its identity. The sagacious philosophy of Bacon, after having been tested by the discoveries and calculations of the astronomer, and the successful researches of the finest minds in every department of science, some reckless men, whose presump-

tion no failure can check, and no folly can make ashamed, are now attempting to set aside. By pretended penetration into the arcana of life and spirit; by turning the mind inwards upon itself, and endeavoring to find, at once, within its secret chambers, that knowledge which is due only to patient and modest induction of indubitable facts, these transcendental adventurers would lead us back into a kind of ontological limbo, filled with shapes more shadowy, fantastic, and monstrous, than the *quiddities* and *entities* of the middle-air paradise of those powers of darkness—the school-men. The humility and caution of Bacon and Newton, are by them set at naught, and the noble proof afforded, in the case of these great philosophers, that “whoso humbleth himself shall be exalted,” is altogether lost upon the hasty and headlong rationalists of the present day. They go as unconcernedly to work as if accurate and protracted observation were unbecoming a man, as if authentic history were an old volume of tales, as if already ascertained truth were a mass of obsolete opinions; and in spite of fact, and demonstration, and testimony, do they weave their airy webs from filaments of undevout imagining, to maze and entrap such creatures as deem themselves eagles soaring toward the sun, because they are not just so very terrestrial as to be unable to fly. There is, with all their rashness and audacity, abundant cunning in their procedure, and an apparent spirituality in their speculations, illuminated oft times with flashes of eloquence and poetry, which is extremely captivating. They dispense, moreover, with all tedious investigation, and painstaking experiment; and as they carry their mental apparatus always along with them, their equipments are so convenient and simple, that impatient seekers of royal roads to knowledge, eagerly join in their train, and swell their triumph. If we contend with them in behalf of truth, they would, if possible, allure us from our long-established and well-tried strong-holds, to some foggy and moonlit field of their choosing, and persuade us to leave behind the armor which we have proved, for certain air-drawn daggers, and *open sesame* passwords, in the use of which they fatally excel. The good old argument, from contrivance and design, for

the being of a God, which, Plato tells us, was convincing to Socrates, and which, in the recent Bridgewater Treatises, has been built up impregably, they would superciliously shame us from, as something exceedingly common place, and contemptibly ecclesiastical; and the mighty array of external evidence for the divinity of the Bible, being really too hard to grapple with, is as coolly dropped by them into oblivion as if it had never been. They treat it as an old fashioned and exploded theory, and seem to say to us when we mention it — “is that all you know? have you been dozing in some sleepy-hollow, while the world moved? and do you actually bring forward, at this advanced epoch of intellect, reasonings that might have appeared irrefragable to our grandfathers in their boyhood, but which, like the old hypothesis respecting the era of creation, and the old cycle and epicycle astronomy of Egypt, are now consigned to the sepulchre of respectable delusions?” Now, it so happens that the advocates of præadamite geological periods have certain substantial, palpable facts to show us — facts gathered by laborious, practical, *bona fide* research — and to the voice of which the devoted truth-lover is constrained to defer; and that the Copernican astronomy has been established by a host of observations and calculations which have given it all the certainty of mathematics; so that, in surrendering a former opinion, in these instances, we are neither called on to contradict previous demonstration, nor to abandon a solid footing in the region of the knowable and the known, and to join a dance of death amid an assembly of metaphysical phantasmagoria. I know not whether there may be here present any disciples of the modern school of spirit-moles and new-revelationists, in whose estimation Natural Theology and Christian Evidences are pitiful, effete things; but if there are, I would tell them, and I would earnestly warn all, that it were weakness and folly in us to abandon our time-honored positions, merely because they are destitute of novelty. We cannot discern in these fortresses any symptoms of decay. Their foundations are as secure as ever, and their battlements are no where crumbling. It is the adversary’s

interest to entice us from them if he can; and not a few have been so enticed — not a few seem really ashamed to abide in the old fastnesses, and to man the old walls; and some have gone forth, like Lord Byron's Cain, and his lordship's Lucifer — a talking, chop-logic fiend, resembling the soul of a transcendentalist escaped from purgatory by mystifying the porter — into the dreamy wilderness of shades, and been well-nigh selling themselves to the enemy. Let every one who regards the verity in his heart, be assured that his best post of safety is the good old citadel, and his trustiest weapons the weapons which such men as Paley and Lardner were wise enough to select. These are not to be classed with superseded things, such as the rude stockades and the bows and arrows of primitive warfare, which guns and gunpowder have rendered unavailing, but they are the enduring bulwarks, and unerring artillery of right reason, and we positively refuse to quit them, lest we fall into ambush. We would respectfully decline reviving the ancient play of Glaucus and Diomedes, and exchanging a suit of armor worth a whole hecatomb of oxen, for one which is not worth even nine.

I trust you will bear with me, therefore, while I endeavor to sketch rapidly the outline of the common argument for the being and attributes of God. My services here shall not have been in vain, if I shall succeed in recalling any chance wanderer to the good old way, and refreshing your recollection of the inexpugnable strength of the venerable fabric of Theism. I will not detain you with a long induction of contrivances from the works of nature, wherewith many or most of you are probably familiar, but will confine myself, as much as possible, to the logical statement of the question. This may be most briefly and clearly done by reducing it at once to the form of a syllogism. Here it is, and I crave your attention to its clearness and precision.

There cannot be design without a designer, contrivance without a contriver.

The works of nature afford undoubted evidence of design and contrivance.

Therefore the works of nature imply a designer and contriver;

and if the contrivances in question manifest power, wisdom, and goodness to which we can assign no limits, it follows that this designer and contriver is God.

Let us then proceed to demonstrate the first proposition of this syllogism—which is that there cannot be design without a designer—contrivance without a contriver.

Now, here some one may allege that the proposition is self-evident, and ought to be taken for granted. To this opinion I answer—*first*, that we must be careful to avoid the precipitancy of those whose rashness has just been censured—*secondly*, that in strict reasoning it is always inexpedient and often dangerous to multiply postulates, and to lay down as axioms, truths which are capable of proof; even though, upon their simple enunciation, they commend themselves to our common sense. Euclid has founded his whole system of plane geometry, on only three postulates and eleven axioms; and yet even he has been found fault with for classing among his axioms, one theorem at least which admits of demonstration. And *thirdly*, I answer that it may well be doubted, whether the inference of a designer, wherever we perceive design, is referable to *intuitive judgment* or to *experience*. Hume, adopting the hypothesis of experience, has raised in opposition to us, a sophistical speculation, which Reid and Stewart, his countrymen, and other metaphysicians of high renown, have attempted to meet upon the footing, that the inference of an intelligent contriver, from the perception of contrivance, is an original principle of our intellectual constitution. It would have been much wiser for these philosophers to have encountered the skeptic on his own field, and on principles already conceded, instead of seeking refuge in a new doctrine, which might be not unjustly disputed, and not unsuccessfully ridiculed as having been got up for a special emergency. Hume's reasoning is to the following purpose. He admits that after we have once observed the connection between a cause and its effect—that after we are once acquainted with both terms of the sequence—then, on the foundation of this experience, we can and do infer a similar cause or antecedent, whenever a similar effect or consequent comes

before us. But he maintains that the world, if it be an effect at all, is an effect altogether singular—an effect not comprehended under any known species—that nothing exists similar or parallel to it, of whose formation we have had any *experience*, and that therefore we can pretend to no satisfactory conclusion, but only to a guess, a conjecture, a presumption, with regard to its cause. If we see a house, he says, we infer, with the greatest certainty, that it had an architect or builder, because this is precisely that species of effect which we have experienced to proceed from that species of cause. But surely you will not affirm that the universe bears such a resemblance to a house, he continues, that we can, with the same certainty, infer a similar cause, or that the analogy is here entire and perfect. He holds that only on the ground of our having once seen the creation of a world by a world-maker—of our possessing the same practical experience in this matter, that we possess in the case of human contrivances—of our having actually beheld a Creator at work—of our being as familiar, for example, with world-making as we are with watch-making or house-building—he holds that only on this ground we can soundly and legitimately arrive at the conclusion of a God.

Now, in order to show the fallacy of Hume's reasoning, I shall also throw his argument into the form of a syllogism.

We infer a designer from design, a contriver from contrivance, solely by our *experience* of their connexion as cause and effect—as the antecedent and consequent of a sequence.

But we have *no experience* in the making of worlds. Mankind have never *seen* such a thing as the antecedent, a Creator, in connexion with the consequent, a world, as they have seen the antecedent, an architect, in connexion with the consequent, a house.

Therefore, mankind can never, by examination of the works of Nature, come to the conclusion that there is a God.

Such is Hume's celebrated Atheistical argument. But of course if either of its two premises involves a fallacy, the conclusion must fall to the ground.

The *second* of these premises every man will at once allow.

We certainly, even with the recent revelations of Geology, have had no such experience of world-making as Hume holds to be necessary. Indeed, if we had, there would have been little room for reasoning on the subject of a God. The whole argument would then have amounted to no more than this, that as mankind had once seen a Creator constructing a planet, so there can be no doubt that this our earth had such a Creator too—just, (and I make the comparison ludicrous on purpose,) as I knowing that my own coat was made by a tailor, infer that each of yours was made by an artist of the same description. There is thus, certainly, no disputing the *second* of Mr. Hume's premises.

Let us examine, therefore, the *first* of them, and see if any fallacy is to be found there.

Mr. Hume appears to have been so intent upon the mere material portion—the mere outward form of man, as to have forgotten, if indeed he ever admitted it, that man's noblest part—that that which really constitutes man, is immortal, and that, at all events, we refer design, invention, contrivance, not to any special outward configuration in the contriver, but to an intelligent mind or spirit, having neither "member, joint nor limb." This is the sophism—the fallacy of which he has been guilty. You will recollect, however, that when we speak of design and a designer, invention and an inventor, contrivance and a contriver, we mean that invention, design, contrivance, imply an intelligent mind or spirit, in which the invention, design, or contrivance originated. The mind and not the body is the person—although in popular phrase we sometimes speak otherwise. It matters not whether there be an external form in the case at all. Now, the inference of an intellectual, personal designer from the perception of design is founded upon undoubted, manifold, universal experience. On the one hand we have had no experience whatever of contrivance *without* a contriver—here I exclude the contrivances of nature, which are, at present in question—while, on the other hand, we have had abundant experience of contrivances, which, every one of them, *had* a contriver. And surely it cannot be that, in spite of this experience—unvarying and uncontradicted—we

should be called upon to conclude, that the wonderful works of nature, are the only contrivances within the range of our observation, of which no account can be given, and from which we can draw absolutely no inference. On the contrary, is not the conclusion inevitable, irresistible, and *completely satisfactory*, upon the very principle of experience to which our adversary appeals, that whensoever and wheresoever contrivance is perceptible, whether in nature or in art—it must have proceeded from an intelligent contriver? The question at issue, moreover, is not, as Hume would have it, regarding the adaptation of means to some *particular* end, but regarding the adaptation of means to *any* end. Almost all sophisms depend on the suppression or alteration of some apparently insignificant term; and here we have an additional fallacy in Hume's reasoning, consisting in the substitution of the definite article *the*, for the indefinite article *a* or *an*. The point to be determined by the student of Natural Theology, is not the adaptation of means to *the* end, but the adaptation of means to *an* end. It matters not whether the contrivance be a watch or a world, an eye or a telescope, an orrery or a universe—if I behold the adaptation of means to *an end*, of parts to *a purpose*, then the experience I have had in design and contrivance, informs me, with a voice of paramount authority, that the design must have had a designer, the contrivance a contriver—that an intelligent spirit, divine or human, must needs have been at work.

I come now to the proof of the *second* proposition in our original syllogism, namely, that the works of nature afford undoubted marks of design and contrivance. But the whole body of illustrations which I had gathered and intended to present to you on this head, I am compelled, for want of time, to forego. In a field so wide and diversified, it was necessary to adopt some principle of selection; and that which I chose was the resemblance, both in point of structure and of purpose, between certain works of nature, and certain contrivances of man—an excellent instance of which we have in Dr. Paley's comparison of the eye with the telescope. Such a selection of



comparisons might obviously be rendered highly interesting and instructive; and might well form the theme of a separate lecture.\*

As, however, our argument from design would be incomplete without some demonstration of its second branch, I shall, by way of such demonstration, hastily allude to one or two examples of design in the operations of nature, which have been brought to my mind by the visit of a distinguished philosopher and naturalist to this city: I refer, of course, to Professor AGASSIZ.

1. In the days of Paley, when the sciences of Geology and Palæontology were yet unknown, he had no reply to the Atheistical doctrine of an infinite succession of plants and animals, produced from each other as we now see them, except this—that how far back soever you may go in the series of living things, still the contrivances and adaptations, wherewith they abound, continue equally unaccounted for, without the intervention of a creative intelligence. Now, though this answer is perfectly sound and in itself perfectly sufficient, yet it is well that such men as Agassiz have been able to furnish us with another, which establishes in the concrete, what Paley and others had arrived at in the abstract. They have succeeded in showing that there is no such thing as transmutation of species by physical and unthinking causes—that the organized beings in every successive geological formation must have been truly created—and that anterior to all these formations, there were a time and a condition of the earth when no organized beings existed. Since, therefore, plants and animals clearly and undeniably had a beginning, we can find rest and satisfaction in no other conclusion than that God is the maker of them all. In their origin we indubitably discern the fiat and finger of a Creator—wise to invent, powerful to execute, and benevolent to impart the inestimable boon of life to creatures, that but for his kindness—that but for the good pleasure of his will—must have remained unconscious and uncreated, in the dust of the ground.

2. In the upper deposits of those geological strata which are commonly called the transition series of rocks, there are accumu-

\* See Appendix.

lated, in prodigious quantities, the remains of land plants which, one or more of them — for this point is perhaps not yet precisely determined — are the materials of the great coal formation: — and here, also, we discover sandstone, refractory or fireclay, mountain lime and rich seams of iron ore. Now, we are in the habit of calling gold and diamonds precious things. Yet these are only precious because they are rare. Coal and iron are, in truth, immensely more precious than they. I need scarcely stop to enumerate and describe the manifold purposes to which these substances are applied. They are natural allies — a subterranean brotherhood of incalculable utility and power. But the ore without the coal, and the coal without the ore, would be comparatively useless. Had it not been for iron, mankind must have continued in a state of relative barbarism; and its value and virtue are daily becoming more wonderfully manifest. By iron, set free through the combustion of coal, time and space are now practically annihilated. Intelligence can at present travel faster than the diurnal motion of the earth! It flashes literally with the speed of lightning. An event which transpires in Albany, at any hour of the day, can really be made known in Cincinnati *before* the same hour by Cincinnati time. The news has left the sun behind, and outstripped the revolution of the spheres! Iron now floats more buoyantly than timber — it is propelled by coal and iron against wind and tide — and guided through the deep by iron when the orbs of heaven have veiled their faces to the tempest! By the instrumentality of iron, the primal curse upon the ground has been, in a great measure, overcome; for the ground, instead of bringing forth thorns and thistles, is made, by iron, to bloom with nearly the original luxuriance and loveliness of Eden. With implements of iron, we now cleave passages through the everlasting hills, and yet with this same iron, we can spin a thread as slender and delicate as the gossamer. Seeing, therefore, that the ore of this marvelous metal would be comparatively useless if we had no coal wherewith to smelt it, and no receptacles to stand the necessary pressure and heat — and that the coal, also, would be compara-

tively useless if we had no tools and engines of iron wherewith to work it — how does it happen, I ask, that the coal seam and the iron band should be placed in the earth's crust contiguous to one another — that, in the same neighborhood, we should generally find lime for a flux — and farther, that there should likewise be at hand a suitable supply of sandstone and fireclay for the construction of the smelting furnaces? Do these extraordinary and apt arrangements evince no method and design? As well might we affirm that the same materials are congregated by chance in the court yards of Pittsburgh, or of old Carron, in my native land. They were evidently deposited in their subterranean storehouses by a resistless power, with an admirable skill, and in conformity to a benevolence which, through a mighty succession of ages, regarded the future comfort and convenience of human kind. This reference to man as visible throughout all mundane arrangements, and in none more so than in the geological formation, which is, at once, the vehicle of two such valuable productions as coal and iron. And may we not add, as part of the whole grand conception in the mind of Providence, that over the most extensive magazines of these minerals are located the two great branches of the Anglo-Saxon race — the Americans and the British — who, like a new chosen seed, seem destined, by their aid, to spread civilization, and knowledge, and Christianity, over the entire face of the globe?

3. Although all the sciences are really revelations of the Great Being who is the substance of truth, there are certain pursuits whose testimony for God is usually counted more explicit and satisfactory than that of others. Of these pursuits, Anatomy and Physiology are, perhaps, the most favorable for the Theist's purposes, and have received the greatest measure of attention. They have been the chosen fields of investigation with all students of Natural Theology, from Socrates downwards to Dr. Roget and Sir Charles Bell. And in these fields, also, Professor Agassiz, although not a theologian, has reaped *his* greenest laurels; and found that the Pantheistic theory, to which, with other German *alumni*, he was once inclined, is altogether untenable.

ble. By the researches of Anatomy and Physiology we obtain stronger evidence than anywhere else to prove that *God is* — and, having made this discovery, then the majesty of his power and the mystery of his wisdom receive their grandest illustration in the downward exploring of Geology, with its mighty convulsions and vast periods of time, and the upward sublimities of Astronomy, with its illimitable spaces, and stupendous motions, and the overwhelming awfulness of its unerring machinery. Fain would I linger on the exquisite contrivances of the animal frame and functions — but, however reluctantly, I must confine myself to a single example.

If, on the street or highway, you happened to pick up a little wheel or lever, the like of which you had never seen before, you might conclude that it belonged to some piece of mechanism, but of what precise description you could not tell. Suppose, however, that by making inquiries upon the subject, you find reason to suspect that it may be part of the works, say, of a clock. You therefore take it to one who is skilled in clock-making, and he instantly resolves your doubts in regard to the matter. It *is* really part of the works of a clock. The clock-maker will tell you, farther, the exact place in the machine which it had occupied; and if you could discover near the same spot where you found it, the whole, or part of the remaining works, he could expertly put them together, or supply, if you desired it, any portions which had not been recovered. Now, in such a case as this, would you hesitate for a moment to grant that there was proof of contrivance and design in a machine so thoroughly understood by the supposed artisan, and displaying such a very accurate adaptation of parts to a purpose? I presume you would not — I know you could not. I shall, therefore, point you to a similar case in nature, fully anticipating a similar conclusion. The zoological species of the earlier fossil animals have been for ages extinct; but there is, in their structure, such a general observance of anatomical and physiological laws, that amidst the many seeming anomalies of their shape and members, men like the illustrious Cuvier and his distinguished pupil Agassiz, are able to recon-

struct their skeletons from the remains which are found imbedded and preserved in the ancient strata of our globe. It is a matter of comparatively little difficulty to put together the bones of a human skeleton, or any other skeleton of living species; because we are in possession of models whereby to arrange them. But there are no such models for the arrangement of a newly discovered fossil skeleton, or — what appears even a more arduous task — for the replacement of the scales of a fossil fish. Conceive that, as frequently happens, only certain parts of the skeleton — say the head and the teeth — are exhumed. How in such a case do our anatomical geologists proceed? They have studied with the most minute care the dependence of one portion of the animal frame upon the others — they have thoroughly investigated the relations between the organs of living creatures and their food — and they have made themselves perfectly acquainted with their means of defence and the elements of their habitation. With this previous preparation they proceed to examine the fossil bones which have been dug up. These, according to our supposition, are the teeth and the bones of the head. From these bones the comparative anatomist can at once decide whether the animal in question has been a fish, a quadruped, a bird, or a reptile; and moreover, if for instance it happens to have been a quadruped, whether it lived upon flesh, or herbs, or roots — and whether it dwelt habitually on land, or sometimes sought its sustenance in the waters; or again, if it have been a reptile, he can tell to what particular genus it belonged, and what were its precise habits and mode of subsistence. But every part of the whole animal skeleton is, in all cases, so admirably proportioned, and so accurately adapted, to every other part, that even the scrutiny of a single tooth affords a key to the construction of the entire fabric; and the skilful anatomist is no more at a loss in allocating every bone of the skeleton, than the expert clock-maker is at a loss in allocating the wheels and levers of the complex machinery of a clock. Such skill may indeed seem very wonderful — nevertheless it is unquestionably true; and the secret of it lies not in any necromantic power of scientific men, but in the wise and system-

atic operations of an omniscient and almighty Creator. "We can hardly imagine," says Dr. Buckland, "any stronger proof of the unity of design, and harmony of organization, that have ever pervaded all animated nature, than we find in the fact established by Cuvier, that from the character of a single limb, and even of a single tooth or bone, the form and proportions of the other bones, and the condition of the entire animal may be inferred. This law prevails no less universally throughout the existing kingdoms of animated nature, than in those various races of extinct creatures that have preceded the present tenants of our planet; hence, not only the frame-work of the fossil skeleton of an extinct animal, but also the character of the muscles by which each bone was moved, the external form and figure of the body, the food, and habits, and haunts, and mode of life of creatures that ceased to exist before the creation of the human race, can, with a high degree of probability, be ascertained." To give you some idea of the extreme accuracy which has been attained in these wonderful researches, I need mention only one fact, which, I am convinced, you will deem quite sufficient. Dr. Buckland, of Oxford, has distinguished himself in examining a class of fossils named by him coprolites or dung-stones. These are neither more nor less than the petrified excrements of fossil animals. On the side of one of these Dr. Buckland observed a small scale, which, of course, he referred to some fish — but of what species he could not tell. The instant, however, that he showed it to Mr. Agassiz, the latter not only pronounced upon the exact species of the fish, but also at once declared the precise place which the scale had occupied upon the fish's body. And this was a creature that, untold ages ago, had actually been devoured by another, and digested in its stomach, with the exception of the single scale that remained adhering to the coprolite! Now, I ask — and am I not entitled to ask fearlessly? — that if the bodies of these extinct animals had been the result of a mere chance-medley, and not the contrivances of an intelligent mind, it would have been utterly impossible, after the lapse of so many myriads of years, to put their skeletons together? There could have been no room what-

ever for analogy and comparison. To reconstruct them would have been as hopeless a task as to replace in their former positions, the dispersed fragments of a heap, or the scattered stones of a mountain-cairn! Does not, therefore, the minute and marvelous precision at which geologists have arrived, in the recomposition of fossil skeletons, imply as incontestibly the evidence of adaptation and design, as it was implied in the instance of the clock to which I some time ago referred? Does it not? The man who can resist such evidence, must either be a natural, or a willing and a wicked fool. It is the fool who "hath said in his heart, there is no God."

So much must suffice for the demonstration of the *second* proposition of our syllogism — namely, that the works of nature afford undoubted marks of contrivance and design. Wherefore, recalling our *first* proposition, that there cannot be design without a designer — contrivance without a contriver — we come at last to the GRAND CONCLUSION that the works of nature *have proceeded* from an intelligent DESIGNER and CONTRIVER — and that this designer and contriver must be a powerful, wise, and benevolent God, is manifest from the fact that, no *limit* can be set to the power and wisdom displayed in nature — and that the adaptations and contrivances visible in the universe, are characterized by an obvious purpose, on the Creator's part, to provide for the sustenance, comfort, and safety of his creatures, and especially of *man*, who is the delegated lord of all!

It is thus that from an examination of external nature we can establish the existence and the natural attributes of God — his wisdom, his power, and the general benevolence of his plans. But he is possessed of attributes even nobler than almightiness and omniscience. These are his moral perfections — his holiness, justice, mercy, and truth. On these the material creation is altogether silent; and it is not until we study the moral nature of man — its harmonies, its relations, and its production of good and evil, reward and punishment — that we obtain from the creation of God any idea of his moral character. This fact, so far as I know and believe, was never fully demonstrated by any philo-

sopher prior to Chalmers. It was one of the great thoughts of that great man; who, as in many other of his reasonings, may have found the germ of it in the writings of some of his predecessors, but, notwithstanding, may fairly claim the merit of having first formed it into a regular and irrefragible argument. Founding his position on Butler's great doctrine of the supremacy of conscience, Chalmers has elaborated a demonstration of surpassing eloquence and cogency for the love, and the truth, and the righteousness, and the infinite purity of Him who is lord of the conscience. This department of the proof is traced and applied exactly in the same manner as the foregoing, and those who desire to master it, and regale themselves with reading worthy of a man, would do well to peruse Chalmers on the subject.

You will perceive that though it might have been *desirable*, it really is not *necessary* that I should prolong this lecture by attempting specially to elucidate the *personality* of Deity — that which the Pantheist denies. Indeed, the refutation of Atheism and Pantheism is one and the same. A designer is a person — a contriver is a person — an inventor is a person — intelligence and wisdom are attributes of a person, and not of a principle. The wisdom and the power of a principle are manifestly only figurative expressions for the wisdom and power of the person who founds it, and acts upon it. The intelligence of a principle is nonsense. And the moral branch of the argument is still more decisive on the question of God's personality. No doubt, the law of God is described in the Bible as holy and just, true, and righteous, and good. But a law apart from a law-giver, is nothing. It is the mode according to which he operates; the expression of his will; the transcript of his own personal character — of what he is, or what he knows he ought to be.

But I must hasten to a close; for, warned as I have been, I feel somewhat nervous on the score of detaining you. Yet there is one view of the present subject which I could never forgive myself for omitting, and which, I am sure, you would regret, if I should entirely pass it by. However, I can present you with an outline of it only.



There are two distinct ways in which we arrive at the knowledge of a God. The one is by an examination of the works of Nature, and has been already described; the other is by establishing the authenticity, genuineness and veracity of Divine Revelation — and deserves a far more extensive discussion than I can now afford to give it. These two processes, which lead to the same conclusion, are, nevertheless, entirely independent of each other. It is a great, but not an uncommon mistake, to imagine, that we must, by help of what is termed the *Natural Argument*, be persuaded of the existence and attributes of a Supreme Creator, previously to any study of the word of God, or to any investigation of the proof on which the authority of the Bible is founded. Even Paley, with all his sagacity, seems to have fallen into this error. Towards the close of his treatise on the Evidences of Christianity, he says: “Let the constant recurrence to our observation of contrivance, design and wisdom, in the works of Nature, once fix upon our minds the belief of a God, and after that, all is easy;” as if it were indispensably requisite to secure this belief *through the works of Nature*, antecedently to our looking into the scriptures themselves, or to our being arrested by the disclosures wherewith the scriptures abound. It may be true that most or all of those who peruse the Bible, and inquire into the proofs of its divine origin, have actually attained a previous conviction that there is a God. But such conviction is by no means a necessary preliminary — a *sine qua non* — to our entering on the consideration of the written record. It may be a desirable thing, yet is not an indispensable thing; for we can suppose a man stumbling on the Bible as it were by accident — we can suppose a man who has never thought of a God — never dreamed of a first cause — never sought or heeded skill and adaptation in the works of Nature — casually taking up the scriptures, and glancing over them, as he would over any other curious volume. Now, what would be the probable result in such a case? Our casual inquirer would soon perceive that in each page of the Bible the existence of a God is taken for granted — asserted throughout in every possible variety of expression —

and enlarged upon so as to convey a clear idea of a powerful and benevolent intelligence who created and who rules the universe. And the idea would impress him all the more forcibly by reason of its novelty, and because it would exhibit, in a new light, surrounding objects, on which, according to our supposition, he has hitherto bestowed no attention, in respect of their manifesting contrivance and design. Then the next matter for his consideration would obviously be the *evidence* whereon the genuineness, authority and truth of this wonderful volume are based. Now, that evidence is of two kinds—historical and internal—and in both its species it is altogether distinct from that *other* evidence which we draw from nature. By the study of the former—that is, the historical and internal evidence—the individual supposed might and should arrive at the conviction, that the Bible is a divine document—a revelation from another world, from heaven—incontrovertibly establishing the existence and attributes of a God; and this whole process would be gone through without the man's once adverting to what is called the *Natural Argument*—without his seeking or requiring one single proof, except in the perfection of the record itself, and in the historical facts by which its claims to credence are supported.

There is a science of testimony, a science of history, and a science of criticism; and these are the only sciences on which the authority of revelation in any way depends. From all others it is entirely, absolutely distinct. It has positively no connection with them, except in so far as all sciences are *collaterally* connected. It has a subject of its own, objects of its own, facts of its own, evidence of its own. It stands firmly and independently on its own foundation. There is satisfaction in finding that the language of God's works, and the language of God's word, when perfectly interpreted, are to the same effect. They both proceed from the same author, and, if rightly understood, can never disagree. But surely it is grossly unfair—utterly unphilosophical and presumptuous—to demand or expect, that when any discrepancy arises between Theology and some other science, the former must of course give way—timidly and tamely go to the

wall—as if, instead of being the noblest of all sciences, and as certain as any, it were only a vain theory—a popular opinion—a pliant system of compromise and expediency—having neither fixed principles nor substantial basis. We claim for Christian Theology its rightful place. We will not abate its pretensions by one jot or tittle. It is a science, philosophical, beautiful, stable; and it has nothing to dread from legitimate speculation. On the contrary, the march and triumph of *knowledge* must eventually promote the universal triumph of *faith*. In the whole course of my experience, I never met an infidel but one, who had actually pondered the evidences of the Christian religion, and he, as I then feared, turned out afterwards to be insane. There is not an infidel in ten thousand who has studied that evidence. There is not a *Christian* in ten thousand who has studied it. It is a shame to both; but it is a double shame—a piece of contemptuous neglect and thoughtlessness in the professed Christian. By *study*—*real study*—I do not mean the reading of a sixpenny pamphlet, or a popular discourse, or a school boy's text book; but such an earnest, hearty, honest, faithful, intelligent, thoroughly prepared-for investigation, as a subject so momentous demands.

To conclude. That which renders the study of Christianity and its evidences so important, is, that Natural Theology, which deals with our first method of demonstrating the existence and character of the God with whom we have to do, is an imperfect science. This I desire to impress upon you as an infinitely more precious lesson than any mere physical truth, however interesting and sublime. The deductions of the natural argument, are, indeed, valuable and accurate so far as they go; but in our peculiar circumstances they do not go far enough. What men call the religion of nature is not a religion for sinners, and on no account must it be reckoned either as a substitute for, or a necessary supplement to, that knowledge which alone maketh men wise unto salvation. Life eternal is not simply to know the true God. It is also to know Jesus Christ whom he hath sent. Natural Theology *may, and does tell us of the former, although even in that respect, its*

voice possesses not the clearness and authority of inspiration; but Natural Theology tells us absolutely nothing of the latter. Natural Theology records in its own enduring characters, the existence and attributes of a Creator; but it says nothing whatever of a Savior; it is silent as the grave upon that transcendently momentous question to our fallen race — “How shall man be just with God?” — and I should deplore it as the most untoward and lamentable of all results if your investigation of the works of God, led you to undervalue or neglect the thorough searching of the word of God. I am the more deeply earnest on this point, because I am aware that many men, wise in their own conceit, content themselves with professing to seek and worship the Almighty in creation; while they have no taste and little toleration for the more marvellous discoveries which are made of the Almighty in redemption. These are the personages who talk sentimentally about the beauty of virtue — about looking through nature up to nature’s God — about finding sermons in stones, and books in the running brooks — while the Bible, emphatically the Book of books, is, if perused at all, only perused by them for the sublimity of its diction and the literary interest of its narrative. Mistake me not. I do not denounce the admiration of external nature — God forbid! I trust that I am as sensible to nature’s beauties and sublimities, as fond of mingling my soul with the universe, as any man of the same capacity. To the eye of devout imagination the whole world shews the majestic footsteps of Jehovah, who ruleth over all; and to its ear every creature, living or lifeless, organic or inorganic, becomes vocal, as it were, to proclaim the wisdom, power, and goodness of the same Jehovah, whose right it is to govern all things, because he made them all, and provides for them all. But I do denounce the folly of those who, while perceiving much to be admired in the face of nature, are yet determined strangers to all that is most wonderful in the face of God’s anointed. It is true that the Bible itself represents nature, throughout her every province, as confessing a present and presiding Deity; as rendering to him either the homage of terror or of gladness, when he descendeth from his throne to visit

her. Nor can men, whether they be sinful or redeemed, refuse to unite in the general acknowledgement. If the Most High approacheth in wrath, we behold him bending the heavens, and coming down, in his omnipotence, to astound and convulse the universe, even in its most steadfast places, and to its lowest depths. Thick clouds and dark waters are his pavilion; the tempest is under his feet; the thunder or the trumpet blast is his voice; the lightning is the gleam of his eye; and smoke, mingled with flame, is the breath of his nostrils. He rideth on the cherubim—divine symbols of nature—and flieth upon the wings of the wind. If he touch the mountains, they melt; if he look upon the Earth, it trembles; men's hearts fail them for fear; and the channels of the unfathomed deep are disclosed through the chasms of its affrighted waves. Or again, when he approacheth in love, there swells throughout all things, a ready and rapturous exultation; the mountains break forth into singing, the fields rejoice on every side, and the rush as of a harping sound cometh forth from the recesses of the woods; streams murmur praise as they flow, and Ocean uplifts his multitudinous music in conceit with the winds of Heaven; the stars peal notes of congratulations from their spheres, and men join in the grand jubilee with trump, and cornet, and the voice of psalms; while the vaulted sky, like a high temple roof, reëchoes the mighty chorus of adoration! But do not forget, I beseech you, that this homage of nature is rendered to God, not simply as the *Creator*, but chiefly as the *Savior*, the *Redeemer*, and the *Judge*. It has continual reference to his last great advent, to the last great change which this Earth shall undergo, and the awful transactions of that day of consummation. There is a catastrophe unspeakably more terrible and decisive than any that has befallen the material frame-work of our globe; but out of the ruins of which there hath likewise arisen, as in these natural convulsions, a nobler and a more enduring creation. Mankind sinned and fell, and forfeited the glory and blessedness of Eden; but mankind are also created *anew*, and the Paradise, which is their purchased inheritance—the Paradise into which the *tree of life* hath been transplanted, and where the river of life

flows clear as crystal, is a region still more enchanting than was even the seat of primeval felicity, when it shone with the radiance of an undisturbed sky, and celestial visitants shared the hospitality of man, and the Lord God himself walked among the trees of the garden! This is a Paradise that fears no forfeiture; a creation that apprehends neither termination nor decay; an Eden which no tempter can ever invade, and no sin can ever deform. This Paradise shall be in the new Heavens, and the new Earth wherein dwelleth righteousness—in a world which has undergone its last great convulsion, upheaving the dead, not in fragments and skeletons, but living and to live for aye; a world purified by fire, and sublimed into a residence fit for the incorruptible bodies and holy spirits of the redeemed, whom He that is conqueror of death and prince of life, shall crown with glorious immortality, and whose eternal portion shall be none other than the incomprehensible God himself—the fullness of Him that filleth all in all.



# ADDITIONAL ILLUSTRATIONS

OF THE

## ARGUMENT FROM DESIGN.

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As a specimen of this mode of illustrating the argument,\* there are here presented two examples of skilful and benevolent contrivance in nature, which are similar to the operations of man. The first is connected with the science of Geology, which, on its introduction, excited so much exultation among infidels, and uneasiness among the faithful; and the second is physiological, or connected with the animal frame, that richest source of proof for the being of a God. The examples might be multiplied indefinitely.

*Geology.* In order that you may have some idea of the manner in which the solid materials of our globe are arranged, I shall hazard an illustration which expert geologists may characterize as rude, or peradventure unnecessary. But I care not. My object is to be as plain as possible. Conceive, then, a thick plate of glass placed at the bottom of a vessel of water. If you mix with the water a handful of some substance, such as earth or sand, and then allow the mixture to settle, the earth will gradually subside and form a layer or stratum of sediment upon the glass. After the water has cleared, if you again mix a handful of some other substance, and allow this also to subside, a second layer or stratum will be deposited over the former. Let a similar process be repeated a third time, and so on, and you will thus

\* See page 32.



obtain several successive layers or strata, spread one above another, upon the plate of glass. Conceive, now, that these several layers or strata are left to harden, and that thereafter, by some means — as, for instance, the application of heat — the glass is melted, and in certain parts projected, say by the force of expansion, in streams upward through the overlying strata, to various heights, and in various directions; some not so high as the upper surface, some just as high, and others so high as to rise above and partially to overflow it. Suppose farther that the melted glass is permitted to cool and crystalize. The whole complex crust would then present the following appearance. The layers or strata would be here and there broken up; their original horizontal position would be disturbed; in some places they would incline to or from the protruded molten masses, in others they would be more irregularly bent and twisted, in others they would be formed into hollow basins or valleys, and in others forced up into ridges and peaks. Again, the crystalline molten matter would be found at various elevations, some veins of it piercing and dividing asunder only to the height of one or two of the layers, others rising in various directions nearly or altogether to the upper surface, others standing in ridges, chains, and peaks, at various heights above the surface, and all of course, differing in volume, according to the quantity of matter that had been upheaved. Let the several lower depressions now be filled with water, flowing between and around the higher levels and eminences. This water will represent the ocean, these lower depressions will represent the ocean's bed; the molten matter will represent the crystalized or unstratified rocks, and the several layers or strata will represent what in geology are termed the primary, transition, secondary and tertiary series. You are not to imagine, however, that the above representation is minutely accurate, or that every particular in the actual crust of the earth has its counterpart in my attempted illustration; for geologists reckon no fewer than eight distinct varieties of crystalline unstratified rocks, and twenty-eight well defined divisions of the stratified *formations*; and no account has been taken of drift or other

appearances subsequent to the deposition of the tertiary rocks. I have merely been endeavoring, in a simple way, to give you some general notion of the nature and arrangement of the solid parts of the globe. To what conclusions, then, are we conducted by geological research? Passing over the theory, which perhaps we cannot yet depend upon as an *absolute fact*, that the body of our planet was originally fluid, or, as some philosophers would have it, nebular, we are sure of this at least, that the globe once consisted entirely of water and unstratified rocks. In these rocks no fossil remains of animals and vegetables are found. Neither have we reason to believe that, in this primitive condition of the earth, any organized substances, such as animals and vegetables, existed upon it; for in the primary series of *stratified* rocks, which are nearest to the *native* granite, and were formed by its disintegration, no fossils have ever been discovered.

Behold our planet, therefore, suspended in space, and untenanted by any living thing. You may either suppose its surface, if you will, to be terraqueous, as it is at present; or you may conceive it to be a ball of granite, every where covered with the primeval ocean. The latter supposition just carries us one step farther back than the former. Those mighty and mysterious forces which have manifestly been employed to upheave the mountains, and to dislocate the Earth's crust or solid frame-work, are now set in operation. Elevations of that crust arise, consisting of crystalline rocks and detritus or mud worn off the rocks by the action of the sea, mingled, in all likelihood, with chemical depositions from its waters. In other parts, the solid frame-work subsides during the convulsion, the ocean seeks the hollows and lower levels, and thus the waters are gathered into one place, while the first dry land appears. There is as yet neither grass, nor herb, nor tree, nor any animated creature. Organization has not yet commenced upon the Earth, because there is as yet no sustenance upon the Earth for organized things. But efficient processes for the production of soil are going on. The detritus and chemical deposits already referred to are its bases, and it is continually being augmented and compounded into fruitfulness, by the pulverizing

of the rocks, and by the repeated action of the same forces which caused the original disruption. As soon as land and water are properly prepared for a race of plants and animals, there opportunely comes forth a supply of these, fitted most studiously, in their shape and structure, for the elements they are destined to inhabit.

Now, with this description in your minds, imagine yourselves to be posted upon the transition series—the first of the stratified rocks that embrace organic remains—and looking back upon the previous eras of the world. What do you discover? You discover forces at work, analogous to the mightiest of those which the ingenuity of man has rendered so far subservient to his will, and which, in nature, are applied in a manner similar to their application in art, though to an immeasurably larger extent. The fundamental granite of the Earth is *fused* and *broken* up; it is intersected with metallic veins; the atmosphere, rains, torrents, and inundations, act upon the rocks and pulverize them; the detritus or pulverized matter is carried down into the waters and there forms beds of mud, and sand, and gravel; and these are again subjected to the disruptive process, and upheaved above the level of the ocean; again also are they subjected to comminution by atmospheric agents, and again buried at the bottom of the sea, to be once more mingled, and elevated into dry lands, in an ameliorated condition, and fitted for the sustenance of living things. Consequently, to draw our comparison between the works of nature and the works of man; if there be evidence of design and contrivance in the processes by which rocks are blasted and ores are smelted, and in these other processes which the skillful husbandman adopts to improve the soil, by irrigation, and exposure to the air, and admixture of mineral substances, can any one refuse to acknowledge that there are also evidences of design and contrivance in those more majestic operations whereby the whole dry land of our globe has been formed and fertilized? Or rather, do we not discern, in the preparation of this Earth for the reception of the vegetable and animal tribes, at once the model of

the agriculturist's art, and proofs of power and goodness, greatly transcending the attributes of man?

Let us look a little more closely into this matter. The chief ingredients of all strata and of all soil, are the earths of flint, clay, and lime. "Each of these, taken singly, or in a state of purity, is comparatively barren." Little or nothing will grow on any *one* of them; but the whole, when blended in due proportions, constitute that kind of land which is suited to the purposes of the agriculturist. Now, in the secondary and tertiary formations, that is to say, in the more recent strata of the globe—the strata nearest to the creation of the human race—we find these ingredients mingled to our hand; while in their detritus, forming diluvial and alluvial districts, we obtain, by farther mixture and compost, the precious treasures of our flats and river valleys. Moreover, in the vicinity of these strata we commonly meet with limestone, marl, or gypsum, which enable us, by artificial means, to improve such soils as are defective in their natural composition. Add to all this, that the animal and vegetable matter furnished by the organized beings which the soil sustains, is returned again into its bosom, to fertilize it for the support of future generations. Meanwhile, for a farther comparison of nature's doings with our own, if you have ever watched an expert horticulturist within his limited domain, (in Europe you can see much more of this than in America,) if you have ever watched him, as I have done, conveying sand, or clay, or lime, or vegetable mold, or stable manure, or bone dust, or guano, or various mixtures of these, to various portions of his garden, according to the ends he wishes to accomplish; and if there be clearly art, and skill, and design, in his several processes, can we deny that in the economy of nature, where the same processes are visible, on an infinitely grander scale, there is evidence of wisdom, power, and goodness, far surpassing human?

But I have not even yet done with this topic. Suppose the strata of the globe had not been uplifted and mingled as they are, presenting to a hasty observer only confusion, instead of intention and intelligence, but regularly arranged one over another, like

the coats of an onion, or the growths of a tree—what consequences must have followed? There might have been a very partial fertility at the surface, but in order to produce any thing like profitable or practicable soil, we must needs have dug deep into the bowels of the earth for more fertile materials, and the manufacture of a single acre would have cost more labor and expense than to supply coal for the cooking fires, and iron for the culinary utensils of a whole district. And where, too, would then have been that magnificent variety of mountain, and valley, and plain, on which even the most prosaic and earth-born gaze with delight, where, the lofty chains that screen the low lands from the blast, where, the streams that, in point of beauty, are to the landscape, what the eye is to the human face divine; that carry sap and verdure and fruitfulness along the vales, and scoop out entrances inward for trade and traffic with the mighty deep? Then consider *farther still*, that as the layers of limestone, sand, and sandstone, which are permeable by water, alternate with beds of clay and marl, which are impermeable, this wise arrangement prevents the total absorption of moisture, thus filtering and giving forth those springs that refresh us with the very sight of their pellucid coolness, and forming a reservoir from whence, by wells, the dwellers in the uplands, or in ill-provided cities, may draw one of the first necessities of life. It is on these secondary and tertiary series and their compounds, that the great grain-fields, and the great mass of human population, together with all sorts of domestic animals, are found; while the Alpine regions, towering upwards into steep and climates, which would not admit of human habitation, are composed of primeval granite, and stand aloft in bare and barren majesty—the home of the eagle and the chamois, the seat of the glacier and the avalanche.

*Anatomy and Physiology.* If any of you have ever passed along the street of some mighty metropolis, such as Paris or London, while workmen have been employed in digging a foundation, or repairing some subterranean aqueduct, you must have *wondered at the multiplicity of pipes and drains with which the*

entire soil is intersected, crossing and recrossing each other, all fitly framed and jointed together, and sending off their branches in every direction — some to convey the means of life, and health, and cleanliness, and illumination to every dwelling — and others to carry away the material which has answered its end, and become useless or deleterious where it is, but destined to farther uses and advantages, in the manifold arts of civilized society—if any of you have ever beheld this, you must have been struck with the enterprise and ingenuity and wonderful resources of man in ministering to his own comforts and necessities, and felt convinced that the *invisible* apparatus and appliances of a large city are not less astonishing than its *visible* accommodations, its pavements and vehicles, and equipages, and edifices, and the vast variety of its merchandize and manufactures. Indeed I myself have been *more* deeply impressed with the former, when I have seen them occasionally disclosed, than I have had with the latter, which are continually open to inspection; and from these buried tubes and archways have I received a more emphatic idea of human design and contrivance, and of human knowledge which is power; so that if the like were now encountered in the ruins of Herculaneum or Pompeii, of Baalbeck or Nineveh, I should be more interested in the discovery, than even in those characters and paintings with which the old walls are still adorned, and in the classic and sculptured structures that line the disinterred avenues, where once resounded the bustle of a busy population. And is it possible that you can think of all this, and yet fail to compare it with a similar but more extraordinary and complicated system of means and appliances, I mean the system of the animal frame, the curious assemblage of veins, and arteries, and ducts, and canals, and cavities, and reservoirs, wherewith your own bodies are provided, receiving, and carrying, and returning, and discharging fluids of many kinds, both liquid and aeriform, and all necessary to the preservation and good order of the economy of life? And while you acknowledge and admire the adaptations of mortal skill, will you refuse at the same time to acknowledge and admire the more minute, and marvellous, and delicate, and perfect adaptations of

your own corporeal structure, or to ascribe them to a *personal intelligence*, infinitely excelling the intelligence of mankind? If in the *city* you have your fountain-heads, and forcing pumps, and gas-holders and sewers, and all the ingenious complication of pipes and stop-cocks, and valves, and filters, and conductors, have you not the very same in the animal body — the heart, the lungs, the circulating system, the glands, the nerves, and other innumerable arrangements known familiarly to the anatomist and physiologist, who can inform you that the only difference in the mechanism of the latter ~~is~~, that it is by far the most astonishing, and admirable of the two?

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